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Chapter 3 - Maintenance Concepts, Levels, and Types**TABLE OF CONTENTS**

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Chapter 3

Maintenance Concepts, Levels, and Types

3.1 Maintenance Concepts

3.1.1 The Aircraft Launch and Recovery Equipment Maintenance Program (ALREMP) supports CNO readiness and safety objectives while providing for optimum use of manpower, facilities, material, and funds to meet operational requirements.

3.1.2 The ALREMP is based on the DoD three-level maintenance concept and is supplemented by CNO, COMNAVAIRSYSCOM, COMNAVSEASYSYSCOM, and TYCOM directives. It provides the management tools required for efficient and economical use of personnel and material resources in performing maintenance, and enables standardization in the ALRE community to accomplish mission requirements. It provides the basis for establishing standard organizations, procedures, and responsibilities for the accomplishment of all maintenance on aircraft launch and recovery equipment and associated material. The division of maintenance into three levels allows management to:

- a. Assign maintenance tasks according to the complexity, depth, scope, and range of work to be performed.
- b. Classify maintenance functions by levels.
- c. Assign responsibility for maintenance functions to a specific level.
- d. Accomplish any particular maintenance task or support service at that level which ensures optimum economic use of resources.

3.2 Maintenance Levels

3.2.1 ALRE maintenance is based on continuing operation in an environment approaching constant use of resources and equipment, on repetitive cycles. Reliability and safety of operation are the prime results of a successful maintenance program. These requirements are met through a planned maintenance system (PMS) defined in OPNAVINST 4790.4C and augmented by corrective maintenance when required. Maintenance will be performed at the lowest practical level, either organizational, intermediate, or depot level, in order to maintain the required readiness and material condition.

3.2.2 Organizational maintenance is that maintenance which is normally performed by the operating unit in support of its own operations. This work is usually accomplished by maintenance or

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operator personnel assigned to the carrier's V-2 division; however, in some cases organizational maintenance may be done by intermediate or depot activities. Organizational maintenance functions generally can be grouped under the following categories:

- a. Inspection, operation, and servicing as defined and required by the Planned Maintenance System (PMS).
- b. Corrective and preventive maintenance, including on-equipment repair and removal/replacement of defective components.
- c. Incorporation of technical directives (TDs), within prescribed limitations.
- d. Record keeping and reports writing.

3.2.3 Intermediate maintenance is that maintenance that is normally performed by designated maintenance activities in support of fleet units. It consists of on/off-equipment repair/replacement of damaged or unserviceable components or assemblies, calibration, manufacture of certain parts, inspections, and technical assistance. Intermediate maintenance includes the following functions and services:

- a. Repair, test, inspection, and modification of ALRE components and related equipment.
- b. Calibration by field calibration activities (FCAs) which perform intermediate level calibration of designated equipment.
- c. Technical assistance to supported activities.
- d. Incorporation of TDs.
- e. Manufacture of selected and non-available parts.

3.2.4 Depot maintenance is that maintenance which requires skills and facilities beyond organizational and intermediate levels and is performed by naval shipyards, commercial shipyards, Naval Ship Repair Facilities, contractor repair, NAVAIRWARCENACDIV Lakehurst Industrial, and by Voyage Repair Teams (VRTs) from specified NAVAIRWARCENACDIV/Naval Aviation Depots (NAVAVNDEPOTS). Depot maintenance is performed on ALRE requiring major overhaul or rebuilding of parts, assemblies, subassemblies, and end items. It includes major modifications, configuration changes, manufacture of parts, testing, inspecting, and all other repair, as required. Depot maintenance supports lower levels of maintenance by providing engineering assistance and performing maintenance beyond the

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capability of lower level activities. Depot maintenance functions may be grouped as follows:

- a. Overhaul and repair of ALRE.
- b. Modernization, modification or conversion of system components.
- c. Calibration (Type III) by Navy Calibration Laboratories (NAVCALABs), as well as standards laboratories (Type I and II).
- d. Incorporation of TDs.
- e. Manufacture of parts and/or accessory items.
- f. Technical and engineering assistance.

3.3 Maintenance Types

3.3.1 There are two general types of ALRE maintenance performed without distinction as to levels of maintenance. They are upkeep and overhaul.

3.3.2 Upkeep is preventive, corrective, or additive work performed on ALRE by operating units under management of the TYCOMs. The term applies to any method of processing required to ensure completion of standard operating periods, including, but not limited to servicing, periodic inspections, functional and bench test, replacement, preservation, modification, and repair.

3.3.3 Overhaul is the process of disassembly sufficient to inspect all the operating components and the basic end article. It includes the repair, replacement, or servicing as necessary, followed by reassembly and functional test. Upon completion of the overhaul process, the equipment will be capable of performing its intended service life.

3.3.3.1 Overhaul may be performed on any type of launch and recovery equipment, associated systems and supporting assemblies. It is performed by industrial type activities assigned functional responsibility of providing maintenance program support. Overhaul is performed with civilian personnel managed by NAVAIRSYSCOM and NAVSEASYSYSCOM under CNO direction, and coordinated through the TYCOMs. Overhaul is normally a function of industrial and/or engineering activities, and the NAVAIRWARCENACDIV/NAVAVNDEPOT VRTs.